

APPENDIX G.1: PRELIMINARY REMEDIAL GOALS FOR LEAD: BASELINE RECEPTORS

Adult Blood Lead Model
RME Outdoor Industrial Worker
Amtrak Maintenance Facility, Wilmington, DE
Preliminary Remedial Goal

Stantec

Calculations of Preliminary Remediation Goals (PRGs)

U.S. EPA Technical Review Workgroup for Lead, Adult Lead Committee

Version date 6/21/09

EDIT RED CELLS

RME Outdoor Industrial Worker

Variable	Description of Variable	Units	GSDi and PbBo from Analysis of NHANES 2007-2012
$PbB_{fetal, 0.95}$	95 th percentile PbB in fetus	ug/dL	5
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	Geometric standard deviation PbB	--	1.7
PbB_0	Baseline PbB	ug/dL	0.7
IR_s	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100
$AF_{S, D}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{S, D}$	Exposure frequency (same for soil and dust)	days/yr	225
$AT_{S, D}$	Averaging time (same for soil and dust)	days/yr	365
PRG		ppm	548

Adult Blood Lead Model
Generic Excavation Worker
Amtrak Maintenance Facility, Wilmington, DE
Preliminary Remedial Goal

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Generic Excavation Worker

Variable	Description of Variable	Units	GSDi and PbBo from Analysis of NHANES 2007-2012
$PbB_{fetal, 0.95}$	95 th percentile PbB in fetus	ug/dL	5
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	Geometric standard deviation PbB	--	1.7
PbB_0	Baseline PbB	ug/dL	0.7
IR_s	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.330
$AF_{S, D}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{S, D}$	Exposure frequency (same for soil and dust)	days/yr	20
$AT_{S, D}$	Averaging time (same for soil and dust)	days/yr	365
PRG		ppm	1,867

Adult Blood Lead Model
Adult Trespasser
Amtrak Maintenance Facility, Wilmington, DE
Preliminary Remedial Goal

Stantec

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EDIT RED CELLS

Adult Trespasser

Variable	Description of Variable	Units	GSDi and PbBo from Analysis of NHANES 2007-2012
$PbB_{fetal, 0.95}$	95 th percentile PbB in fetus	ug/dL	5
$R_{fetal/maternal}$	Fetal/maternal PbB ratio	--	0.9
BKSF	Biokinetic Slope Factor	ug/dL per ug/day	0.4
GSD_i	Geometric standard deviation PbB	--	1.7
PbB_0	Baseline PbB	ug/dL	0.7
IR_s	Soil ingestion rate (including soil-derived indoor dust)	g/day	0.100
$AF_{S, D}$	Absorption fraction (same for soil and dust)	--	0.12
$EF_{S, D}$	Exposure frequency (same for soil and dust)	days/yr	10
$AT_{S, D}$	Averaging time (same for soil and dust)	days/yr	365
PRG		ppm	12,325